

CLAIMS:

1. A transcoder for a variable length coded data stream comprising:
a receiver for receiving the variable length coded data stream comprising
variable length coded coefficients;
a significance processor for determining if variable length coded coefficients
5 are significant coefficients or less significant coefficients in accordance with a significance
criterion;
a truncation processor for truncating the less significant coefficients;
an encode processor for generating a transcoded data stream comprising
significant coefficients and truncated less significant coefficients.
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2. A transcoder as claimed in claim 1 wherein the truncation comprises setting a
value of the less significant coefficients to zero.
3. A transcoder as claimed in claim 1 wherein the significance criterion
15 comprises a criterion of whether a value of a variable length coded coefficient is above a
threshold.
4. A transcoder as claimed in claim 1 wherein the significance criterion is
determined in response to an associated frequency parameter of a signal encoded by the
20 variable length coded stream.
5. A transcoder as claimed in claim 1, wherein the variable length coded
coefficients are run length coded and wherein the significance criterion comprises a criterion
of whether a run length of a sequence of variable length coded coefficients is above a
25 threshold.
6. A transcoder as claimed in claim 1, wherein the variable length coded
coefficients are run length coded and wherein a run length value of a significant coefficient is

modified to reflect increased zero coefficients resulting from truncation of less significant coefficients to a zero value.

7. A transcoder as claimed in claim 1 further comprising a subset processor for

5 providing a subset of the variable length coded data stream to the encode processor; and wherein the encode processor is operable to directly include the subset of the variable length coded data stream in the transcoded data stream.

8. A transcoder as claimed in claim 7 wherein the subset of the variable length

10 coded data stream comprises variable length coded coefficients associated with low frequency parameters of a signal coded by the variable length coded stream.

9. A transcoder as claimed in claim 7 wherein the subset of the variable length

15 coded data stream comprises variable length coded coefficients associated with motion compensation parameters of a video signal coded by the variable length coded stream.

10. A transcoder as claimed in claim 7 wherein the subset of the variable length coded data stream comprises control data.

20 11. A transcoder as claimed in claim 7 wherein the subset of the variable length coded data stream comprises header data.

12. A transcoder as claimed in claim 1 wherein the truncation processor is further operable to perform a diminution operation on values of the significant coefficients.

25 13. A transcoder as claimed in claim 12 wherein the diminution operation is a shifting operation.

14. A transcoder as claimed in claim 12 wherein the diminution operation depends
30 on an associated frequency parameter of a signal encoded by the variable length coded stream.

15. A transcoder as claimed in claim 12 wherein the diminution operation depends on a run length associated with at least one variable length coded coefficient.

16. A transcoder as claimed in claim 12 wherein a diminution operation parameter is depending on a plurality of coefficient values of the significant coefficients.

5 17. A transcoder as claimed in claim 12 wherein a diminution operation parameter depends on an achievable word length reduction for at least one of the significant coefficients.

18. A transcoder as claimed in claim 1 wherein the variable length coded
10 coefficients comprise quantised Discrete Cosine Transform coefficients of a compressed video signal.

19. A transcoder as claimed in claim 1 wherein the encode processor is operable to generate a scalable signal data stream comprising the transcoded data stream as a base layer
15 and at least one additional enhancement layer.

20. A transcoder as claimed in claim 19 wherein the truncation processor is operable to generate remainder coefficient values associated with the truncation of the less significant coefficients, and the at least one additional enhancement layer comprises at least
20 some of the remainder coefficient values.

21. A transcoder as claimed in claim 19 wherein the truncation processor is operable to perform a shifting operation on the significant coefficients and to generate remainder coefficient values associated with the shifting operation; and the at least one
25 additional enhancement layer comprises at least some of the remainder coefficient values.

22. A transcoder as claimed in claim 21 wherein the truncation processor is further operable to perform a second shifting operation on the remainder coefficient values and to generate second remainder coefficient values, and the encoding processor is operable to
30 include at least some of the second remainder coefficient values in a second enhancement layer.

23. An encoder for encoding a signal comprising:

a signal encoder for generating a variable length coded data stream from the signal; the variable length coded data stream comprising variable length coded coefficients;

a significance processor for determining if variable length coded coefficients are significant coefficients or less significant coefficients in accordance with a significance
5 criterion;

a truncation processor for truncating the less significant coefficients and for generating remainder coefficient values associated with the truncation of the less significant coefficients; and

an encode processor for generating a scalable signal data stream comprising a
10 base layer comprising significant coefficients and truncated less significant coefficients and an enhancement layer comprising at least some of the remainder coefficient values.

24. A decoder for decoding a scalable content signal data stream; the decoder comprising:

15 a receiver for receiving the scalable content signal data stream; the scalable content signal data stream comprising a base layer comprising significant coefficients and truncated less significant coefficients, and an enhancement layer comprising remainder coefficient values associated with the truncated less significant coefficients;

a combine processor for generating a combined data stream from combining
20 the variable length coded coefficients and truncated less significant coefficients of the base layer and the remainder coefficient values of the enhancement layer; and

a decode processor for generating a decoded signal in response to the combined data stream.

25 25. A decoder for decoding a variable length coded data stream; the decoder comprising:

a receiver for receiving a variable length coded data stream comprising variable length coded coefficients having shifted coefficient values; and

a shift processor for generating a shift compensated data stream by performing
30 an inverse shifting operation on the variable length coded coefficients having shifted coefficient values; and

a decode processor for generating a decoded signal in response to the shift compensated data stream.

26. A decoder as claimed in claim 25 further comprising a shift value receiver for receiving a shift value parameter associated with the shifted coefficient values and wherein the inverse shifting operation is determined in response to the shift value parameter.

5 27. A method of transcoding of a variable length coded data stream, the method comprising the steps of:

receiving the variable length coded data stream comprising variable length coded coefficients;

10 determining if variable length coded coefficients are significant coefficients or less significant coefficients in accordance with a significance criterion;

truncating the less significant coefficients; and

generating a transcoded data stream comprising significant coefficients and truncated less significant coefficients.

15 28. A computer program product enabling the carrying out of a method according to claim 27.